DOCUMENT RESUME

ED 146 228 TM 006 630

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TITLE Group Comparisons for The Test of Standard Written English.
INSTITUTION Educational Testing Service, Princeton, N.J.
SPONS AGENCY College Entrance Examination Board, New York, N.Y.
REPORT NO CEEB-RDR-77-78-1; ETS-RB-77-15
PUB DATE Aug 77
NOTE 59p.

EDRS PRICE MF-$0.83 HC-$3.50 Plus Postage.
DESCRIPTORS *College Entrance Examinations; College Freshmen; *College Placement; *Comparative Analysis; Comparative Testing; *English Instruction; Essays; Grades (Scholastic); Higher Education; *Multiple Choice Tests; Racial Differences; Sex Differences; Statistical Data; *Writing Skills
IDENTIFIERS *Test of Standard Written English

ABSTRACT

Group comparisons for male, female, majority, and minority students were conducted for the Test of Standard Written English (TSWE). Data for two academic years and from 18 different institutions were analyzed by pooling data across institutions within each of the academic years. Analyses of data from the first academic year focused on relationships between TSWE scores and grades, and analyses of the second academic year focused on relationships between TSWE scores and scores on graded writing samples. No important group differences were observed in traditional correlational analyses for either grade or essay prediction, or in either correlational or regression analyses of the second year essay data. Analyses of correct and incorrect placement decisions (hits and misses) at specific TSWE cut-off scores revealed no significant group differences whether outcomes were based on English course grades or on freshman year writing performance. The proportion of incorrect decisions (misses) was less for minority students than for any of the groups. For all groups, the TSWE appeared to predict freshman year writing performance as well as or better than pre-course writing samples, high school English grades, or high school rank in class. (Author/DSE)

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COLLEGE ENTRANCE EXAMINATION BOARD
RESEARCH AND DEVELOPMENT REPORTS

RDR 77-78, No. 1

RESEARCH BULLETIN
RB-77-15 August 1977

Group Comparisons for The Test of Standard Written English

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EDUCATIONAL TESTING SERVICE
PRINCETON, NEW JERSEY
BERKELEY, CALIFORNIA

GROUP COMPARISONS

for

THE TEST OF STANDARD WRITTEN ENGLISH

Hunter M. Breland

This paper is based upon research supported by the College Entrance Examination Board. Researchers are encouraged to express freely their professional judgment in the conduct of such projects; therefore, points of view or opinions stated do not necessarily represent official College Entrance Examination Board position or policy.

Educational Testing Service

Princeton, New Jersey

August 1977

Abstract

Group comparisons for male, female, majority, and minority students were conducted for the Test of Standard Written English (TSWE). Data for two academic years and from 18 different institutions were analyzed by pooling data across institutions within each of the academic years. Analyses of data from the first academic year focused on relationships between TSWE scores and grades. Analyses of the second academic year focused on relationships between TSWE scores and scores on graded writing samples. No important group differences in traditional correlational analyses for either grade or essay prediction were observed. No important group differences were observed in either correlational analyses or regression analyses of the second year essay data. Analyses of correct and incorrect placement decisions (hits and misses) at specific TSWE cut-off scores revealed no noteworthy group differences whether outcomes were based on English course grades or on freshman year writing performance. Whether grades or essays were used as the outcome, the proportion of incorrect decisions (misses) was less for minority students than for any of the groups. For all groups, the TSWE appeared to predict freshman year writing performance as well as or better than pre-course writing samples, high school English grades, or high school rank in class.

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Introduction

The Test of Standard Written English (TSWE) is a 30-minute multiple-choice examination that assesses the ability to use the conventions of standard written English. The TSWE was introduced, on an experimental basis, in 1974 as a part of the Admissions Testing Program (ATP) of the College Entrance Examination Board. The ATP includes the Scholastic Aptitude Test (SAT), achievement tests in 14 subjects, and the Student Descriptive Questionnaire (SDQ). In 1977 the TSWE will become a permanent part of the ATP, offered along with the SAT, but it will also be available to colleges for separate use.

During the 1974-75 and 1975-76 academic years a total of 18 colleges collaborated with Educational Testing Service in two studies of the TSWE. Fourteen colleges participated the first year and four the second. These colleges are described by type and location in the table on the next page. General results of the first year study were reported in Breland, Conlan, and Rogosa (1976) and general results of the second year study in Breland (1977). This report describes special group comparisons made for both the first year and the second year studies. The previous two reports, however, provide the details of data collection and descriptions of the variables employed.

Because of the small numbers of subjects that result from the subdivision of samples within colleges, all data within each of the two groups of colleges were pooled. That is, the 1974-75 data from fourteen colleges formed one group and the 1975-76 data from four colleges formed a second group. With the larger numbers of cases thus available for the two sets, it was then possible to subdivide each of the sets by sex and ethnic identification. Even so, the small number of available minority

Descriptions of Institutions

Data Collection	College Code	Summary Description	Region	Location
1974-75	A	Two-year public comprehensive community junior college	Southwest	Urban
	B	Four-year public university	Far West	Urban
	C	Two-year public community college	Far West	Small town
	D	Four-year Catholic University	Far West	Suburban
	E	Four-year public college of arts and science	Southeast	Small city
	F	Four-year private college	Northeast	Small city
	G	Four-year public liberal arts teachers college	Southeast	Small city
	H	Four-year public college of arts and science	Northeast	Small town
	I	Two-year public junior college	Northeast	Urban
	J	Four-year public multipurpose college	Northeast	Suburban
	K	Four-year Catholic university	Midwest	Suburban
	L	Four-year Public university	Southeast	Urban
	M	Four-year private nonsectarian liberal arts college	Far West	Suburban
	N	Four-year public teachers' college	Northeast	Small City
1975-76	P	Four-year public university	Southeast	Suburban Community
	Q	Four-year college of engineering and technology for men and women	Northeast	Metropolitan Area
	R	Four-year public university for men and women	Southeast	Small town
	S	Four-year private nonsectarian university for men and women	Northeast	Metropolitan Area

Note: College O was not included in the analysis of this report because data for College O were not easily combined with data for the other colleges.

students required that only the classifications of "majority" and "minority" be used. Minorities were identified as those students describing themselves as American Indian, Black or Afro-American or Negro, Mexican-American or Chicano, Oriental or Asian-American, or Puerto Rican. Students describing themselves as White, Caucasian, or "other" were classified as majorities.

Since the kinds of analyses possible were slightly different for the two data sets, the results are presented in two parts. Part I reports the results of analyses of data from the 14 colleges that participated during the 1974-75 academic year. Part II reports results for the four colleges in the 1975-76 study. The Part I analyses used course grades as a criterion, while in Part II, a unique criterion of student performance was available--actual writing samples. Writing samples were collected at three different times during the 1975-76 academic year. Each of these writing samples was then scored, independently, by two different experienced essay readers. The readers did not know from what college the essay came, when it was written, or the ethnic identification of the student. However, the writing sample did contain the student's name and identification of the sex of the student.

Part I: Group Comparisons for the 1974-75 Data Set

A total of almost 7,000 students in 14 colleges provided data during the 1974-75 academic year. This total included 3,081 males, 3,627 females, 4,053 majorities and 888 minorities. The 888 minorities consisted of 43 American Indians, 456 Blacks, 206 Mexican-Americans, 158 Asian-Americans, and 25 Puerto Ricans. For each of the four major groups, analyses of 3 types were conducted: (1) comparisons of bivariate distributions of TSWE scores and course grades, (2) comparisons of instructional placements by TSWE scores, and (3) comparisons of the correlations of TSWE scores with all other available data.

Comparisons of Distributions

Tables 1, 2, 3, and 4 present comparisons of freshman English course grades as a function of the TSWE score range. (These TSWE scores were obtained in special administrations of the TSWE conducted by the participating institutions). At the top of each table are shown the numbers of students obtaining certain course grades and at the bottom of each table percentages are given. For example, the modal frequency for males was 128 students scoring in the 35-39 TSWE range and receiving C's in their freshman English course. The modal frequency for females consisted of 188 students scoring in the 50-54 TSWE range and receiving B's in their freshman English course. For majorities the modal frequency was 200 at a TSWE range of 45-49 and grade of B, and for minorities the modal frequency was 66 at 35-39 and a grade of C.

Table 1

TSWE/Grade Distributions for Male Students in Fourteen Colleges During the 1974-75 Academic Year

TSWE Score Range	Freshman English Course Grades					
	A's	B's	C's	D's	F's	Total
			Frequencies			
60+	15	12	2	0	0	29
55-59	54	57	33	4	4	152
50-54	43	102	83	8	7	243
45-49	23	102	127	16	3	281
40-44	16	86	93	25	19	239
35-39	9	74	128	29	29	269
30-34	11	42	53	17	22	145
25-29	3	21	37	7	23	91
20-24	3	11	30	10	38	92
Total	177	507	586	116	155	1,541
			Percentages			
60+	51.7	41.4	7.0	0.0	0.0	100
55-59	35.5	37.5	21.7	2.6	2.6	100
50-54	18.0	42.0	34.1	3.3	3.0	100
45-49	8.2	36.3	45.2	6.0	5.0	100
40-44	7.0	36.0	39.0	10.5	8.0	100
35-39	3.3	27.5	47.6	11.0	11.0	100
30-34	7.5	28.6	37.4	11.5	15.0	100
25-29	3.2	23.0	41.0	8.0	25.3	100
20-24	3.3	12.0	33.0	11.0	41.3	100

Notes: 1. Unsatisfactory (U) grades counted as F.
2. Satisfactory (S) grades excluded.

Table 2

TSWE/Grade Distributions for Female Students in Fourteen Colleges During the 1974-75 Academic Year

TSWE Score Range	Freshman English Course Grades					
	A's	B's	C's	D's	F's	Total
			Frequencies			
60+	40	24	4	0	0	68
55-59	77	114	49	1	2	243
50-54	71	188	88	7	7	361
45-49	65	158	150	8	12	393
40-44	21	97	92	9	13	232
35-39	18	93	103	19	17	250
30-34	13	35	80	16	9	153
25-29	5	18	37	6	23	89
20-24	2	9	33	6	20	70
Total	312	736	636	72	103	1,859
			Percentages			
60+	59.0	35.0	6.0	0.0	0.0	100
55-59	32.0	47.0	20.1	.4	.8	100
50-54	20.0	52.1	24.4	2.0	2.0	100
45-49	16.5	40.2	38.2	2.0	3.0	100
40-44	9.0	42.0	40.0	4.0	6.0	100
35-39	7.2	37.2	41.2	8.0	7.0	100
30-34	8.5	23.0	52.3	10.4	6.0	100
25-29	5.6	20.2	41.6	6.7	26.0	100
20-24	2.8	12.8	47.1	8.6	28.6	100

Notes: 1. Unsatisfactory (U) grades counted as F.
2. Satisfactory (S) grades excluded.

Table 3

TSWE/Grade Distributions for Majority Students in Fourteen Colleges During the 1974-75 Academic Year

TSWE Score Range	Freshman English Course Grades					
	A's	B's	C's	D's	F's	Total
			Frequencies			
60+	28	21	4	0	0	53
55-59	73	104	46	2	5	230
50-54	86	193	89	11	10	389
45-49	79	200	166	14	16	475
40-44	35	110	107	27	19	298
35-39	28	107	145	30	23	333
30-34	14	54	79	21	15	183
25-29	4	22	34	9	6	75
20-24	3	8	24	8	3	46
Total	350	819	694	122	97	2,082
			Percentages			
60+	52.8	40.0	7.5	0.0	0.0	100
55-59	31.7	45.2	20.0	.9	2.1	100
50-54	22.1	50.0	22.9	3.0	2.6	100
45-49	17.0	42.1	35.0	3.0	3.3	100
40-44	12.0	37.0	36.0	9.0	6.4	100
35-39	8.4	32.1	43.5	9.0	7.0	100
30-34	7.6	29.5	43.2	11.4	8.2	100
25-29	5.3	29.3	45.3	12.0	8.0	100
20-24	6.5	17.4	52.1	17.3	6.5	100

Notes: 1. Unsatisfactory (U) grades counted as F.
2. Satisfactory (S) grades excluded.

Table 4

TSWE/Grade Distributions for Minority Students in Fourteen Colleges During the 1974-75 Academic Year

TSWE Score Range	Freshman English Course Grades					
	A's	B's	C's	D's	F's	Total
			Frequencies			
60+	2	2	0	0	0	4
55-59	5	9	6	0	0	20
50-54	3	21	14	1	2	41
45-49	7	44	35	2	8	96
40-44	6	30	32	1	6	75
35-39	5	46	66	5	16	138
30-34	7	21	58	7	9	102
25-29	2	17	38	2	30	89
20-24	2	14	39	6	41	102
Total	39	204	288	24	112	667
			Percentages			
60+	50.0	50.0	0.0	0.0	0.0	100
55-59	25.0	45.0	30.0	0.0	0.0	100
50-54	7.3	56.2	34.1	2.4	4.8	100
45-49	9.2	31.6	46.1	2.6	10.5	100
40-44	8.0	40.0	42.7	1.3	8.0	100
35-39	3.6	33.3	48.0	3.6	11.6	100
30-34	6.9	20.6	56.9	6.9	8.8	100
25-29	2.2	19.1	42.7	2.2	33.7	100
20-24	1.9	14.0	38.2	6.0	40.2	100

Notes: 1. Unsatisfactory (U) grades counted as F.
2. Satisfactory (S) grades excluded.

Of principal interest in the group comparisons is whether the TSWE scores and the grades appear to relate in a similar way for all four groups. Consider the grades made by those students making the maximum possible TSWE score (60+). Over half (52%) of males in this category made A, 59% of females made A, 53% of majorities, and 50% of minorities (note that the 50% minority figure is based upon only 4 minorities who obtained the maximum TSWE score). More stable percentages can be obtained by using a lower TSWE cutting score and combining the A and B grade frequencies. For example, of those scoring 50 or above on the TSWE, 67% of males made A or B, 76% of females, 75% of majorities, and 65% of minorities. Consider also low score ranges. Of those students scoring below 30 on the TSWE, only 21% of males made A or B, only 18% of females, only 30% of majorities, and only 18% of minorities.

A more systematic analysis of the distributions of grades and TSWE scores can be made through a consideration of "hits" and "misses". Hits might be assumed to be of two kinds: (1) those students who made either A or B in their freshman English courses and who scored relatively high on the TSWE, and (2) those students who made C, D, or F and who scored relatively low on the TSWE (the inclusion of C students in misses reflects recent trends toward inflated grades). Conversely, misses are of the two opposite kinds: (1) those students who made A or B but who scored relatively low on the TSWE, and (2) those students who made D or F but scored relatively high on the TSWE. If a cut is made at a score of 40, we have a four-fold table of this type:

	A or B	C, D, or F
TSWE $\geq$ 40	Hit	Miss
TSWE < 40	Miss	Hit

If such a table is constructed for all four groups being considered a comparison can then be made of the ratio of hits to misses for each group. The numbers of hits and misses for each group are obtained by summing values in Tables 1, 2, 3, and 4. The resulting tables, with the hit/miss ratios, are given below.

Males (1541)

	A or B	C, D, or F
TSWE $\geq$ 40	510	434
TSWE < 40	174	423

$H/M = \frac{933}{608} = 1.53$

Females (1859)

	A or B	C, D, or F
TSWE $\geq$ 40	855	442
TSWE < 40	193	369

$H/M = \frac{1224}{635} = 1.93$

Majorities (2082)

	A or B	C, D, or F
TSWE $\geq$ 40	929	516
TSWE < 40	240	397

$H/m = \frac{1326}{756} = 1.75$

Minorities (667)

	A or B	C, D, or F
TSWE $\geq$ 40	129	107
TSWE < 40	114	317

$H/M = \frac{446}{221} = 2.02$

These hit/miss analyses suggest that the TSWE is most useful as a predictor of performance (as measured by course grades) for females and least useful for males. The male problem is apparent from the figures in the right-hand side of the table for males. About the same number of high-scoring males made low grades (434) as did low-scoring males (423).

A difficulty with the hit and miss approach is its dependence upon the cutting score. If the cut is made at 35, for example, different hit/miss ratios are obtained:

Males (1,541)

	A or B	C,D, or F
TSWE ≥ 35	593	620
TSWE < 35	91	237

$H/M = \frac{830}{711} = 1.17$

Females (1,859)

	A or B	C,D, or F
TSWE ≥ 35	973	303
TSWE < 35	75	508

$H/M = \frac{1481}{378} = 3.92$

Majorities (2,082)

	A or B	C,D, or F
TSWE ≥ 35	1064	714
TSWE < 35	105	199

$H/M = \frac{1263}{819} = 1.54$

Minorities (667)

	A or B	C,D, or F
TSWE ≥ 35	180	194
TSWE < 35	63	230

$H/M = \frac{410}{257} = 1.60$

Comparing the ratios for a cut at 35 with those obtained with a cut at 40, it can be seen that the hit/miss ratio for females increases substantially while those for the other three groups decreased slightly.

Comparisons of Course Placement

Tables 5 and 6 compare the characteristics of students placed in different instructional sequences. A short-sequence usually consisted of one course (one semester or quarter) and a long-sequence two courses (two semesters or quarters). Usually, the better students are assigned to the shorter sequences. Table 5 shows TSWE score means, standard deviations, and ranges for the four groups of interest subclassified by instructional sequence. Table 6 shows course grades for the same subclassification.

Table 5

Comparison of TSWE Pretest Means, Standard Deviations, and Ranges for Short- and Long-sequence Freshman English Students in Fourteen Colleges During the 1974-75 Academic Year

Group	TSWE Scores for Short-sequence Students				TSWE Scores for Long-sequence Students			
	N	Mean	S.D.	Range	N	Mean	S.D.	Range
Male	1268	44.4	9.1	20-60	356	35.1	9.8	20-60
Female	1549	46.6	8.9	20-60	192	33.5	9.4	20-59
Majority	1601	45.2	9.0	20-60	188	40.6	9.3	20-60
Minority	265	39.7	10.0	20-60	348	32.9	9.2	20-59

Table 6

Comparison of Course Grade Means, Standard Deviations, and Ranges for Short- and Long-sequence Freshman English Students in Fourteen Colleges During the 1974-75 Academic Year

Group	Grades for Short-sequence Students				First course Grades for Long-sequence Students			
	N	Mean	S.D.	Range[a]	N	Mean	S.D.	Range[a]
Male	1268	2.34	1.04	0-4	356	2.04	1.31	0-4
Female	1549	2.68	.93	0-4	192	1.92	1.29	0-4
Majority	1601	2.52	1.03	0-4[b]	188	2.67	.88	0-4[c]
Minority	265	2.12	1.03	0-4[b]	348	1.96	1.28	0-4[c]

[a] Grades coded zero may represent either Fail or Unsatisfactory.

[b] Of the 1601 majority students, 199 (12.4%) had grades of D, F, or U, whereas of the 265 minority students, 49 (18.5%) had grades of D, F, or U.

[c] Only 10 of the 188 majority students (5.3%) had grades of D, F, or U, whereas 82 of the 348 minority students (23.6%) had grades of D, F, or U.

In Table 5, an interesting observation is that the ranges of TSWE scores are about the same regardless of instructional placement. Even though the mean TSWE scores were higher for short-sequence students, the assignment of students at extremes of TSWE scores to both sequences suggests a lack of precision in placement. With respect to the sex and ethnic classifications, Table 5 shows that the average TSWE score for the short-sequence minority group was substantially less (39.7) than the average TSWE score for the other groups (between 44.4 and 46.6). For long-sequence students, the mean TSWE score for majorities was somewhat above the mean TSWE scores for long-sequence males, females, and minorities. Suggested is a proclivity for "over-placing" minorities and for "under-placing" majorities.

The course grade averages in Table 6 paralleled the TSWE averages. The mean course grade for short-sequence minorities (2.12), like the mean TSWE score for short-sequence minorities, were well below the mean course grade for the other groups. And the mean course grade for long-sequence majorities (2.67), like the mean TSWE score for long-sequence majorities, was much higher than the mean course grade for the other groups. Thus, the course grades seemed to follow the TSWE averages and support the judgment of a lack of precision in placement made from the TSWE score observation.

Correlational Analyses

Tables 7, 8, 9, and 10 give correlations among 14 variables when data for all 14 colleges were pooled. Note that data were not available on all variables for all groups in sufficient quantity to allow

for stable correlations. Thus, dashes (-) in these tables indicate either that no data were available or that the number of cases for which a correlation could be computed was less than 50. Nevertheless, interesting comparisons can be made for a number of the correlations.

Fall grades for long-sequence students appear to correlate with the TSWE Pretest scores, with slight variations for each of the groups: .30 for males, .42 for females, .30 for majorities, and .33 for minorities.[1] Similarly, the fall grades for short-sequence students also correlate with the TSWE pretest scores: .39 for males, .36 for females, .34 for majorities, and .43 for minorities. The differences in these correlations are probably not worthy of note, given the different sizes of the samples upon which they are based and the differences in the variances for each of the groups.

The prediction of fall grades on the basis of the Essay Pretest can also be compared for each of the groups. These correlations are less than those above representing the same prediction using TSWE scores, but no important differences among groups are discernible: .33 for males, .21 for females, .21 for majorities, and .25 for minorities. Thus, these correlations indicate that the TSWE is somewhat more related to course grades than is the Essay Pretest, for all groups.

Despite the apparent superiority of the TSWE over an essay as a predictor, the TSWE Pretest (Variable 12) and the Essay Pretest (Variable 10) correlate rather well with each other for all groups: .41 for males,

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[1] Note, however, that grade correlations may be attenuated by the pooling of grade data for colleges with different grading standards.

Table 7

Correlation Matrix for Males in Fourteen Colleges
During the 1974-75 Academic Year

Variable Number and Description	Variable Number													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Fall Grades (Long-sequence)		-	-	-	-	-	106	106	284	163	-	452	-	-
2. Fall Grades (Short-sequence)	-		50	-	-	-	-	194	816	-	160	1513	280	60
3. TSWE Posttest	-	.29		-	-	-	-	54	50	-	134	146	95	-
4. Essay Posttest (Holistic)	-	-	-		-	-	-	-	-	-	-	-	-	-
5. Essay Posttest (Grammar)	-	-	-	-		-	-	-	-	-	-	-	-	-
6. Spring Grades (Short-sequence)	-	-	-	-	-		-	194	76	-	-	194	-	-
7. Spring Grades (Long-sequence)	.48	-	-	-	-	-		444	139	-	-	444	-	-
8. Spring Grades (Total)	.48	.50	.13	-	-	1.00	1.00		215	-	69	638	71	-
9. High School Rank (Self-report)	.10	.29	.32	-	-	.13	.20	.19		196	102	1627	70	63
10. Essay Pretest	.33	-	-	-	-	-	-	-	.17		-	204	-	-
11. CLEP English Comp.	-	.36	.64	-	-	-	-	.06	.30	-		260	216	58
12. TSWE Pretest	.30	.39	.59	-	-	.31	.26	.28	.26	.41	.59		371	64
13. SAT-V Pretest	-	.29	.28	-	-	-	-	.10	.16	-	.56	.59		64
14. High School Rank (College report)	-	.19	-	-	-	-	-	-	.50	-	.18	.17	.30	

Note: Correlations below diagonal, number of cases above.
Correlations based on less than 50 cases not shown.

Table 8

Correlation Matrix for Females in Fourteen Colleges
During the 1974-75 Academic Year

Variable Number and Description	Variable Number													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Fall Grades (Long-sequence)		-	61	-	-	-	82	82	332	198	61	418	-	-
2. Fall Grades (Short-sequence)	-		155	58	58	-	-	319	1261	68	286	1979	366	97
3. TSWE Posttest	.51	.25		-	-	-	59	73	69	-	266	285	206	-
4. Essay Posttest (Holistic)	-	.47	-		60	-	-	-	60	-	59	60	55	52
5. Essay Posttest (Grammar)	-	.56	-	.52		-	-	-	60	-	59	60	55	52
6. Spring Grades (Short-sequence)	-	-	-	-	-		-	319	188	-	-	319	-	-
7. Spring Grades (Long-sequence)	.42	-	.34	-	-	-		369	166	-	58	369	-	-
8. Spring Grades (Total)	.42	.55	.30	-	-	1.00	1.00		358	-	79	688	74	-
9. High School Rank (Self-report)	.19	.31	.43	.37	.31	.35	.24	.32		254	165	2260	109	101
10. Essay Pretest	.21	.17	-	-	-	-	-	-	.25		-	265	-	-
11. CLEP English Comp.	.42	.43	.76	.50	.47	-	.23	.23	.50	-		417	348	99
12. TSWE Pretest	.42	.36	.72	.41	.53	.31	.21	.29	.37	.45	.66		464	101
13. SAT-V Pretest	-	.38	.65	.52	.45	-	-	.39	.42	-	.73	.67		99
14. High School Rank (College report)	-	.35	-	.32	.32	-	-	-	.62	-	.40	.43	.31	

Note: Correlations below diagonal, number of cases above.
Correlations based on less than 50 cases not shown.

Table 9

Correlation Matrix for Majority Students in
Fourteen Colleges During the 1974-75 Academic Year

Variable Number and Description	Variable Number													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Fall Grades (Long-sequence)		-	82	-	-	-	85	85	226	73	82	235	-	-
2. Fall Grades (Short-sequence)	-		-	92	92	-	-	258	1787	51	175	1847	167	156
3. TSWE Posttest	.45	-		-	-	-	53	53	109	-	85	115	-	-
4. Essay Posttest (Holistic)	-	.44	-		-	-	-	-	93	-	93	94	89	83
5. Essay Posttest (Grammar)	-	.57	-	.47		-	-	-	93	-	93	94	89	83
6. Spring Grades (Short-sequence)	-	-	-	-	-		-	258	249	-	-	258	-	-
7. Spring Grades (Long-sequence)	.31	-	.36	-	-	-		261	249	-	-	261	-	-
8. Spring Grades (Total)	.31	.45	.36	-	-	1.00	1.00		498	-	-	519	-	-
9. High School Rank (Self-report)	.23	.35	.37	.33	.39	.30	.22	.29		109	255	2977	177	163
10. Essay Pretest	.21	.30	-	-	-	-	-	-	.37		-	124		-
11. CLEP English Comp.	.45	.54	1.00	.47	.52	-	-	-	.47	-		262	167	156
12. TSWE Pretest	.30	.34	.74	.44	.54	.27	.25	.31	.39	.33	.67		178	164
13. SAT-V Pretest	-	.39	-	.34	.27	-	-	--	.29	-	.52	.53		162
14. High School Rank (College report)	-	.33	-	.25	.32	-	-	--	.57	-	.33	.35	.33	

Note: Correlations below diagonal, number of cases above.
Correlations based on less than 50 cases not shown.

Table 10

Correlation Matrix for Minority Students in Fourteen Colleges During the 1974-75 Academic Year

Variable Number and Description	Variable Number													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Fall Grades (Long-sequence)		-	-	-	-	-	-	-	361	264	-	373	-	-
2. Fall Grades (Short-sequence)	-		-	-	-	-	-	-	263	55	-	274	-	-
3. TSWE Posttest	-	-		-	-	-	-	-	-	-	-	-	-	-
4. Essay Posttest (Holistic)	-	-	-		-	-	-	-	-	-	-	-	-	-
5. Essay Posttest (Grammar)	-	-	-	-		-	-	-	-	-	-	-	-	-
6. Spring Grades (Short-sequence)	-	-	-	-	-		-	-	-	-	-	-	-	-
7. Spring Grades (Long-sequence)	-	-	-	-	-	-		54	50	-	-	54	-	-
8. Spring Grades (Total)	-	-	-	-	-	-	1.00		60	-	-	64	-	-
9. High School Rank (Self-report)	.14	.27	-	-	-	-	.31	.32		305	-	845	-	-
10. Essay Pretest	.25	.17	-	-	-	-	-	-	.23		-	319	-	-
11. CLEP English Comp.	-	-	-	-	-	-	-	-	-	-		-	-	-
12. TSWE Pretest	.33	.43	-	-	-	-	.01	.10	.25	.44	-		-	-
13. SAT-V Pretest	-	-	-	-	-	-	-	-	-	-	-	-		-
14. High School Rank (College report)	-	-	-	-	-	-	-	-	-	-	-	-	-	

Note: Correlations below diagonal, number of cases above.
Correlations based on less than 50 cases not shown.

.45 for females, .33 for majorities, and .44 for minorities. Again these differences in correlations may be the result of a number of chance factors and, accordingly, generalizations with respect to differences among them are not appropriate. Further comparisons of TSWE and essay scores are presented in Part II which follows.

Part II: Group Comparisons for the 1975-76 Data Set

The four institutions participating in the 1975-76 study provided data on 9,144 students identified by sex and 7,718 students identified by ethnic status. This total included 5,162 males, 3,982 females, 6,839 majorities, and 879 minorities. The 879 minorities consisted of 21 American Indians, 683 Blacks, 8 Mexican-Americans, 134 Asian-Americans, and 33 Puerto Ricans. Whereas the focus in the 1974-75 data collections was on relationships between TSWE scores and course grades, the focus in the 1975-76 data collections was on actual writing samples. Over 2,500 samples of writing were obtained, and most of these could be compared with TSWE scores for the same students. As in Part I, Part II contains bivariate distributions, but the two variables are TSWE scores and essay scores rather than TSWE scores and grades. These bivariate distributions were generated for each of the four groups of interest. Correlational tables were also developed for each of the four groups, as before. Regression analyses, which were not conducted for the Part I data, are presented for Part II. No analyses of placement by group were conducted for the Part II data.

Comparisons of Distributions

Tables 11, 12, 13, and 14 present a comparison of TSWE scores and essay scores for the four groups.[2] The essays were scored by two

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[2] These TSWE scores were obtained at the time students took the SAT when applying for college. The essay scores were obtained during the freshman year of college.

Table 11

TSWE/Essay Score Distributions for Male Students in Four Colleges During the 1975-76 Academic Year

TSWE (SAT) Score Range	Essay Score											
	12	11	10	9	8	7	% Above Average	6	5	4	3	2
Pre-course Essay Score Frequencies												
60+		1	1	1	1	1	62%	3				
55-59	1	4	10	13	7	11	82%	5	3	2		
50-54	2	3	4	7	18	10	68%	16	2	2	1	
45-49	1		2	6	11	14	59%	8	11	3	2	
40-44			1	5	10	6	48%	13	15	13	3	
35-39			1	4	8	9	41%	14	17	9	5	
30-34			1	1	2	4	11%	5	23	21	8	8
25-29					4	1	9%	5	16	13	12	4
20-24						1	2%	1	8	10	19	6
Post-course Essay Score Frequencies												
60+	1			4	1		86%		1			
55-59	1	3	8	9	15	8	80%	9	2			
50-54		4	5	17	9	13	70%	11	5	3	1	
45-49		4	7	6	11	12	73%	8	5	1	0	1
40-44	1	1	1	6	11	15	54%	12	10	6	1	1
35-39			2	8	9		46%	15	12	3	4	1
30-34		1		2	6	10	26%	20	17	9	5	2
25-29				1	5	5	24%	2	18	6	4	4
20-24					2	1	10%	5	6	4	8	3

Table 12

TSWE/Essay Score Distributions for Female Students in Four Colleges During the 1975-76 Academic Year

TSWE (SAT) Score Range	Essay Score											
	12	11	10	9	8	7	% Above Average	6	5	4	3	2
Pre-course Essay Score Frequencies												
60+	1	4	5	4	6	3	92%	2				
55-59	4	7	9	8	16	14	84%	6	5			
50-54	1	6	10	12	18	15	80%	8	5	2		
45-49			4	6	9	13	78%	3	4	1	1	
40-44		1	1	4	8	11	58%	12	51	1		
35-39		1		3	1	6	29%	9	12	4	2	
30-34					2	8	36%	8	5	5		
25-29			1				5%	7	6	5	2	
20-24						1	7%		3	7	4	
Post-course Essay Score Frequencies												
60+		5	6	4	5	2	92%	2				
55-59	3	7	11	11	19	7	89%	5	2			
50-54	4	5	12	13	10	12	80%	8	3	3		
45-49	1	3	4	4	9	8	69%	10	2			1
40-44			1	5	8	6	50%	14	3	2	1	0
35-39		1	3		4	8	44%	9	3	6	1	1
30-34				3	1	3	24%	7	6	3	4	2
25-29					2	1	15%	7	4	3	1	2
20-24							0%	3	6	2	2	3

Table 13

TSWE/Essay Score Distributions for Majority Students in Four Colleges During the 1975-76 Academic Year

TSWE (SAT) Score Range	Essay Score											
	12	11	10	9	8	7	% Above Average	6	5	4	3	2
Pre-course Essay Score Frequencies												
60+	1	5	5	5	6	4	90%	3				
55-59	3	9	15	16	19	21	81%	10	7	2		
50-54	3	9	12	13	25	20	74%	20	5	3		
45-49	1		4	9	16	21	65%	10	11	4	2	
40-44		1	2	6	12	10	41%	15	17	12	1	
35-39			1	7	5	11	34%	17	20	6	3	
30-34			1		1	6	17%	6	13	13	1	4
25-29					3	1	11%	5	14	10	4	
20-24						1	9%		2	6	1	2
Post-course Essay Score Frequencies												
60+		5	6	6	5	2	89%	2	1			
55-59	3	6	14	17	29	12	83%	12	4			
50-54	3	8	13	23	16	18	74%	17	7	4	1	
45-49	1	6	9	8	16	18	75%	10	7	1		1
40-44	1	1	2	8	13	19	57%	16	10	4	2	1
35-39		1	3	6	11	13	48%	19	7	6	4	
30-34				2	5	9	31%	13	10	7	3	2
25-29				1	4	4	27%	3	14	6		1
20-24					1		8%	2	4	2	2	1

Table 14

TSWE/Essay Score Distributions for Minority Students in Four Colleges During the 1975-76 Academic Year

TSWE (SAT) Score Range	Essay Score											
	12	11	10	9	8	7	% Above Average	6	5	4	3	2
Pre-course Essay Score Frequencies												
60+							0%					
55-59	1				1		100%					
50-54				3	2	1	67%	3				
45-49					2	3	62%		3			
40-44				1	3	5	64%	3		2		
35-39		1			1		13%	3	4	5	1	
30-34				1	3	2	22%	1	8	9	1	2
25-29							0%	2	3	5	2	2
20-24						1	4%		8	7	6	4
Post-course Essay Score Frequencies												
60+							0%					
55-59		1		1			100%					
50-54				1	1	3	62%	1	1	1		
45-49			1	1	2		50%	3				1
40-44				3	1	1	38%	3	1	4		
35-39			1		1	3	31%	3	5	2		1
30-34				2	1	2	18%	8	6	3	3	2
25-29						1	7%	4	1	2	2	5
20-24						1	4%	5	6	3	5	4

different readers, independently, on a scale from 1 (poor) to 6 (good). The two independent scores were then added to yield an essay score scale from 2 to 12. The average essay score fell between 6 and 7. In Tables 11, 12, 13, and 14 scores of 7 or above were, therefore, classified as above average and a percentage computed of those students writing above average essays for each of the TSWE score ranges. The tables show that the percentage of students writing above average essays tend to decrease as the TSWE score decreases. For example, over 80% of students scoring in the 55-59 TSWE score range wrote above average essays regardless of group membership. Much smaller percentages of those in the lower TSWE score ranges wrote above average essays.

Hit and miss analyses similar to these presented in Part I, comparing TSWE scores and course grades, can be conducted for TSWE scores and essay writing performance. Consider hits of two types: (1) students scoring 40 or above on the TSWE and writing essays with scores of 7 or above, and (2) students scoring below 40 and writing essays with scores of 6 and below. Misses are then obtained from the opposite quadrants: (1) students scoring 40 or above on the TSWE but writing essays with scores of 6 and below, and (2) students scoring below 40 on the TSWE but writing essays with scores of 7 and above. The four-fold table will then be:

	Essay Score: 7 to 12	Essay Score: 2 to 6
TSWE $\geq$ 40	Hit	Miss
TSWE < 40	Miss	Hit

The ratio of hits to misses can be computed, as in Part I and these ratios compared for the four groups. From Tables 11, 12, 13, and 14, the following hit/miss tables are derived:

Males (514)

	Essay 7 to 12	Essay 2 to 6
TSWE $\geq$ 40	151	102
TSWE < 40	36	225

$H/M = \frac{376}{138} = 2.72$

Females (403)

	Essay 7 to 12	Essay 2 to 6
TSWE $\geq$ 40	200	101
TSWE < 40	23	79

$H/M = \frac{279}{124} = 2.25$

Majorities (681)

	Essay 7 to 12	Essay 2 to 6
TSWE $\geq$ 40	273	122
TSWE < 40	37	249

$H/M = \frac{522}{159} = 3.28$

Minorities (115)

	Essay 7 to 12	Essay 2 to 6
TSWE $\geq$ 40	22	11
TSWE < 40	9	73

$H/M = \frac{95}{20} = 4.75$

While in Part I grades were most predictable for females, these hit and miss analyses of essays suggest a best prediction for minorities. There were almost five times as many hits as misses for minority students. And also unlike the grade predictions, females (rather than males) were least predictable. Still, there were over two times as many hits as misses for females.

As in the hit and miss analyses of grades in Part I, a change in the cutting score changes the ratios. If the cut is made at a TSWE score of 35, these tables and ratios are obtained:

Males (514)

	Essay 7 to 12	Essay 2 to 6
TSWE ≥ 40	173	147
TSWE < 40	14	180

$H/M = \frac{353}{161} = 2.19$

Females (403)

	Essay 7 to 12	Essay 2 to 6
TSWE ≥ 40	211	128
TSWE < 40	12	52

$H/M = \frac{263}{140} = 1.88$

Majorities (681)

	Essay 7 to 12	Essay 2 to 6
TSWE ≥ 40	297	168
TSWE < 40	13	203

$H/M = \frac{500}{181} = 2.76$

Minorities (115)

	Essay 7 to 12	Essay 2 to 6
TSWE ≥ 40	24	24
TSWE < 40	7	60

$H/M = \frac{84}{31} = 2.71$

The reduction of the cutting score from 40 to 35 decreases the hit/miss ratios for all groups.

Correlational Analyses

The correlational analyses of Tables 15, 16, 17, and 18 show the relationships between TSWE scores and essay scores in another way. Variable 5 is the TSWE score obtained when students took the SAT. Variable 10 is a TSWE test administered at the participating institutions toward the end of the first freshman English course. Variables 8 and 11 are scores obtained on the graded writing samples. The correlation between Variable 5 (TSWE) and Variable 11 (Essay Posttest) is .54 for males, .61 for females, .51 for majorities, and .49 for minorities. Similar comparisons can be made between Variables 5 and 8 and between Variables 8 and 11. For all groups, the TSWE Pretest tends to predict

Table 15

Correlation Matrix for Males in Four Colleges During the 1975-76 Academic Year

Variable Number and Description	Variable Number										
	1	2	3	4	5	6	7	8	9	10	11
1. High School Rank		4123	3226	3227	3227	4283	4283	479	2242	506	475
2. High School English Grade	.56		3267	3267	3267	4209	4209	458	2206	487	454
3. SAT Reading	.36	.35		3961	3961	3961	3961	462	2060	489	462
4. SAT Vocabulary	.34	.32	.77		3962	3962	3962	462	2061	489	462
5. TSWE (SAT)	.38	.36	.69	.69		3962	3962	462	2061	489	462
6. SAT-V	.37	.35	.95	.93	.74		5162	568	2667	604	567
7. SAT-M	.42	.25	.56	.56	.56	.60		462	2061	489	462
8. Essay Pretest	.31	.32	.55	.57	.62	.61	.42		537	514	538
9. College English Grade	.22	.21	.23	.20	.27	.24	.18	.28		576	539
10. TSWE Posttest	.38	.38	.69	.65	.81	.72	.55	.66	.28		530
11. Essay Posttest	.30	.26	.48	.48	.54	.49	.40	.48	.23	.54	

Note: Correlations below diagonal, number of cases above.

Table 16

Correlation Matrix for Females in Four Colleges During the 1975-76 Academic Year

Variable Number and Description	Variable Number										
	1	2	3	4	5	6	7	8	9	10	11
1. High School Rank		3375	2532	2532	2532	3349	3349	372	2016	362	366
2. High School English Grade	.56		2580	2580	2580	3414	3414	374	2037	359	364
3. SAT Reading	.41	.36		3051	3051	3051	3051	357	1835	347	342
4. SAT Vocabulary	.39	.34	.75		3051	3051	3051	357	1835	347	342
5. TSWE (SAT)	.44	.39	.69	.68		3051	3051	357	1835	347	342
6. SAT-V	.43	.37	.94	.93	.74		3982	439	2343	423	423
7. SAT-M	.48	.32	.59	.58	.60	.62		439	2343	423	423
8. Essay Pretest	.33	.33	.53	.53	.60	.51	.46		417	381	404
9. College English Grade	.12	.09	.25	.22	.25	.26	.22	.27		409	409
10. TSWE Posttest	.55	.50	.73	.73	.85	.76	.64	.54	.25		396
11. Essay Posttest	.32	.37	.56	.53	.61	.54	.47	.50	.21	.56	

Note: Correlations below diagonal, number of cases above.

Table 17

Correlation Matrix for Majority Students in Four Colleges During the 1975-76 Academic Year

Variable Number and Description	Variable Number										
	1	2	3	4	5	6	7	8	9	10	11
1. High School Rank		6457	4904	4904	4904	6484	6484	669	3648	673	658
2. High School English Grade	.57		4991	4991	4991	6603	6603	678	3705	685	667
3. SAT Reading	.41	.36		5073	5073	5073	5073	561	2881	569	554
4. SAT Vocabulary	.38	.32	.74		5073	5073	5073	561	2881	569	554
5. TSWE (SAT)	.44	.40	.65	.63		5073	5073	561	2881	569	554
6. SAT-V	.42	.36	.94	.92	.69		6715	685	3741	691	674
7. SAT-M	.43	.20	.50	.51	.48	.55		685	3741	691	674
8. Essay Pretest	.34	.36	.50	.49	.58	.52	.29		645	605	637
9. College English Grade	.17	.19	.21	.17	.25	.22	.11	.27		659	640
10. TSWE Posttest	.49	.46	.68	.61	.80	.69	.43	.56	.24		627
11. Essay Posttest	.35	.33	.45	.40	.51	.44	.26	.47	.20	.51	

Note: Correlations below diagonal, number of cases above.

Table 18

Correlation Matrix for Minority Students in Four Colleges During the 1975-76 Academic Year

Variable Number and Description	Variable Number										
	1	2	3	4	5	6	7	8	9	10	11
1. High School Rank		818	704	704	704	828	828	129	443	134	128
2. High School English Grade	.51		713	713	713	842	842	130	447	135	129
3. SAT Reading	.17	.24		742	742	742	742	115	387	118	113
4. SAT Vocabulary	.17	.25	.76		742	742	742	115	387	118	113
5. TSWE (SAT)	.21	.32	.70	.70		742	742	115	387	118	113
6. SAT-V	.20	.26	.94	.93	.75		871	134	461	138	132
7. SAT-M	.31	.17	.52	.51	.50	.57		134	461	138	132
8. Essay Pretest	.12	.24	.49	.51	.63	.55	.31		128	116	124
9. College English Grade	.05	.12	.18	.18	.20	.17	.16	.15		132	126
10. TSWE Posttest	.21	.39	.56	.55	.78	.66	.42	.63	.20		119
11. Essay Posttest	.05	.26	.36	.48	.49	.46	.30	.50	.10	.50	

Note: Correlations below diagonal, number of cases above.

freshman writing performance as well as or better than the Essay Pretest. There would appear to be no systematic differences in the correlations for the different groups, with the slight differences in correlations probably resulting from sampling differences.

Tables 15, 16, 17, and 18 are also useful for comparing alternate predictors such as high school performance. The correlation between high school rank and the Essay Posttest was .30 for males, .37 for females, .35 for majorities, and .05 for minorities. (In general, for minorities the high school rank seems to correlate lower with all other variables.) The correlation between high school English grade and Essay Posttest was .26 for males, .37 for females, .33 for majorities, and .26 for minorities. These high school data did not predict college performance as well as the TSWE scores or SAT-V scores (Variable 6). Interestingly, the SAT-M score appears to have predicted college English performance better than high school data in some cases.

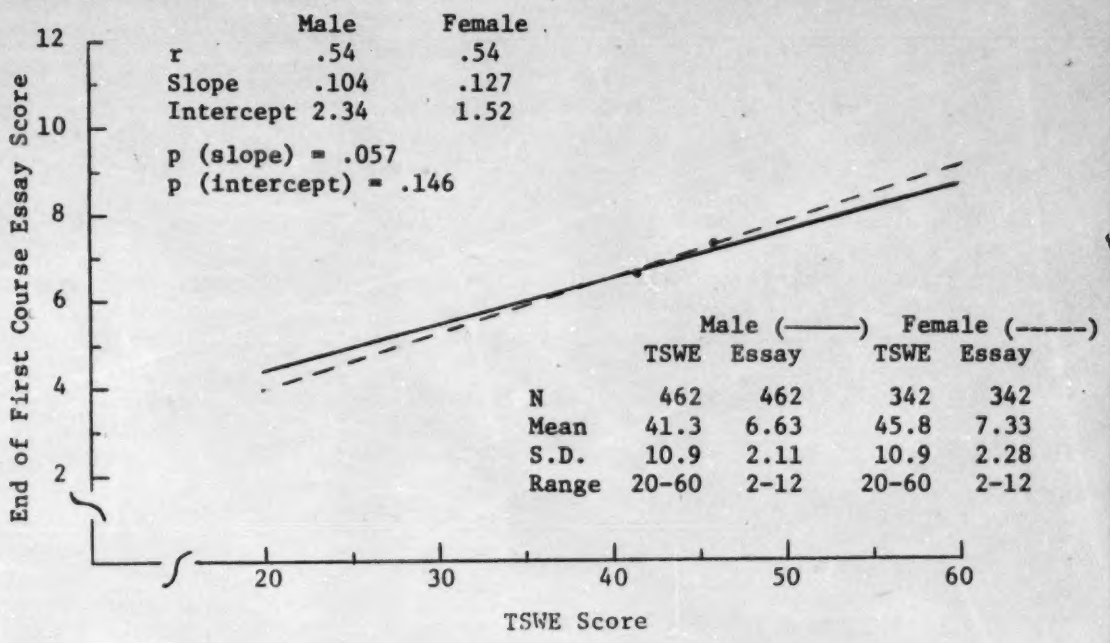
Regression Analyses

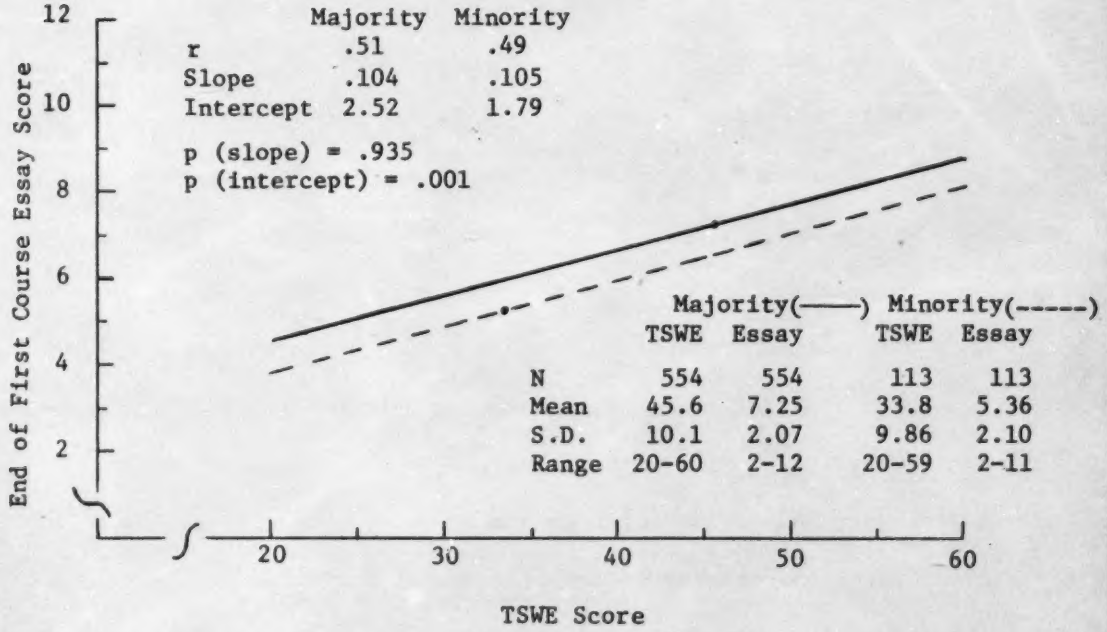
Given the objective essay criterion available for the 1975-76 data, it was of particular interest to compare regressions of the essay on the TSWE scores for the four groups. Numerous such comparisons have been made in past studies using course grades or GPA's as the criterion, but no previous studies have employed an objective, blind-scored essay (that is, the scorers of the essays had never met the subjects who wrote the essays and they had no information concerning the subjects beyond the names, sex, and social security number written on the essays).

Figure 1 shows regression lines comparing males and females (top) and majorities and minorities (bottom). The male-female comparison suggests some real differences in the slopes of the regression lines

Figure 1

Comparison of Regressions of Essay Scores
on TSWE Scores for Males, Females, Majorities, and Minorities





($p = .057$), but the difference in the y-intercept does not achieve significance. (These statistical tests were performed using an analysis of covariance procedure similar to that suggested by Gulliksen and Wilks, 1950.)

difference in slopes are clearly not statistically significant ($p = .935$), and the lines appear to be parallel. On the other hand, the majority-minority differences in the y-intercept are statistically significant ($p = .001$).

Interpretations of these regression comparisons may be made as follows. If a single regression line were used for both males and females (rather than the separate regression lines shown in Figure 1), an under-prediction would tend to occur for females in the high-ability range and an over-prediction in the low-ability range. That is, high-ability females performed slightly better on actual writing tests than the TSWE would have predicted with a single regression line. Conversely, low-ability females performed slightly worse on actual writing tests than a single regression line would have predicted. If a single regression line were used for both majority and minority students, an over-prediction would occur for minorities at all ability levels. That is, minorities did not perform as well on actual writing tasks as the TSWE would have predicted with a single regression line.

While some of these group differences attain statistical significance, it is doubtful whether they are of practical significance. Scatter-plots of the points through which the regression lines were drawn do not suggest important group differences in the relationship between TSWE scores and writing performance.

Discussion

Neither the analyses of Part I nor those of Part II indicate that the TSWE is unfair to either women or minorities. That is, traditional correlational and regression analyses do not show any substantial differences among the relationships which operate to the disadvantage of women or minorities. Nevertheless, these traditional analyses may leave some important issues unexplored. For example, Goldman and Widawski (1976) suggest that it is necessary to go beyond hit/miss analyses (like those done in both Parts I and II) and to consider false-positive and false-negative errors. False-positive errors occur when those predicted to succeed, fail, and false-negative errors occur when those predicted to fail, succeed. The sum of false-positive errors and false-negative errors is the number of misses. Although the placement context in which the TSWE is used is not one of selection vs. rejection, it is still of importance to make accurate predictions. Therefore, it is appropriate to pay particular attention to false negatives; that is, those who were not "selected," but who would have succeeded, had they been.

In Part I, four-fold tables were developed and hit/miss ratios computed. Below, these same tables are presented with the proportions in each cell computed. Note that false-positives are those students in the upper-right hand quadrants and that false-negatives are students in the lower left-hand quadrants. The false-negative quadrants are shaded to emphasize their importance:

Males
(1,541)

		A or B	C,D,F
TSWE	40	510 .33	434 .28
TSWE	40	174 .11	423 .27

Females
(1,859)

		A or B	C,D,F
TSWE	40	855 .46	442 .24
TSWE	40	193 .10	369 .20

Majorities
(2,082)

		A or B	C,D,F
TSWE	40	929 .45	516 .25
TSWE	40	240 .11	397 .19

Minorities
(667)

		A or B	C,D,F
TSWE	40	129 .19	107 .16
TSWE	40	114 .17	317 .48

For males, above, the sum of .28 (the proportion of false-positives) and .11 (the proportion of false-negatives) is the proportion of "misses" (.39). The proportion of misses for each of the groups is:

	Proportion of Misses (Grades)
Males	.39
Females	.34
Majorities	.36
Minorities	.33

In the Goldman and Widawski (1976) procedure, however, the concern is not only with misses but with the type of miss. The logic is that a false-negative error is worse than a false-positive error. In the selection context, false-negatives would be denied an education (at a particular institution) even though they could have succeeded if they had been selected. In a placement situation, false-negatives might be placed in a slower section, even though they could have succeeded in a

faster section. From an institutional perspective and a placement situation, both types of error are of equal importance and accordingly, the analysis of misses is more important than an analysis of false-negatives. This distinction is an important one, for although minorities have the largest proportion of false-negatives (.17) they have the smallest proportion of misses (.33).

Goldman and Widawski emphasize that the use of grades, as in Part I, may introduce biases. For this reason, it is of particular interest to compare the Part I analyses with the Part II analyses, where an objective criterion (essay writing performance) was used. Shown below are the four-fold tables for Part II with the proportions in each quadrant indicated:

Males (493)

	Essay 7 to 12	Essay 2 to 6
TSWE ≥ 40	151 .30	102 .21
TSWE < 40	36 .07	204 .41

Females (403)

	Essay 7 to 12	Essay 2 to 6
TSWE ≥ 40	200 .50	101 .25
TSWE < 40	23 .06	79 .39

Majorities (681)

	Essay 7 to 12	Essay 2 to 6
TSWE ≥ 40	273 .40	122 .18
TSWE < 40	37 .05	249 .36

Minorities (115)

	Essay 7 to 12	Essay 2 to 6
TSWE ≥ 40	22 .19	11 .10
TSWE < 40	9 .08	73 .63

When an objective criterion (a blind-scored essay) is used, the greater proportion of false-negatives for minorities tends to disappear. The small differences that occur for the four groups (.07, .06, .05, .08)

could have occurred by chance, and--for all four groups--the observed proportion of false-negatives is less than the observed proportion of false-positives. As in the grade outcome comparisons, the proportion of misses for minorities is less than the proportion of misses for any of the other three groups:

	Proportion of Misses (Essays)
Males	.28
Females	.31
Majorities	.23
Minorities	.18

In view of the dependence of these hit and miss analyses on the cutting score, regression analyses (which are independent of the cutting score) are in many ways preferable. Nevertheless, the hit and miss procedure shows specific outcomes when knowledge of the specific use of a test is known.

The proportion of misses above was based upon a cutting score of 40 for all four groups. Since the proportion of misses depends upon where the cutting score is set, it is of interest to compute the proportion of misses for all four groups at all possible cutting scores. Moreover, an analysis can be done for both the grade outcomes of Part I and the essay outcomes of Part II.

The analysis of grade outcomes of Part I yielded the results shown in Table 19. Table 19 shows that to minimize the proportion of misses in course placement, a different cutting score would have been needed for males and females but the same cutting score would be used for majorities and minorities. The proportion of misses for males was minimized at a TSWE cutting score of 50, that for females at 40, and that for both majorities and minorities at 45. The differences in proportions of

Table 19

Proportions of Misses Based on Grade Outcomes

TSWE Cutting Score	Males (1,541)	Females (1,859)	Majorities (2,082)	Minorities (667)
60	.43	.53	.54	.36
55	.38	.46	.48	.34
50	.35	.37	.40	.33
45	.37	.35	.35	.32
40	.39	.34	.36	.33
35	.46	.35	.39	.38
30	.48	.39	.42	.45
25	.52	.40	.42	.53
20	.56	.44	.44	.64

misses for males and females, however, are not substantial. The cutting score for males and females could have been set at the 45 score optimum for minorities without any important increase in proportions of misses for the other groups.

The same kind of analysis for the essay outcomes of Part II are given in Table 20. In Table 20, a TSWE cutting score of 45 minimized the proportions of misses for males, females, and majorities. The proportion of misses for minorities was minimized at a TSWE cutting score of 40. As for the course grade analyses, the outcome differences were not great in the minimum region. Consequently, a cutting score of 45 for all groups would have been appropriate.

No substantial differences in the optimum cutting scores were observed across groups for either the grade outcome data of Part II or the essay outcome data of Part II. When viewed in conjunction with the regression analyses of Figure 1, the hit and miss analyses strongly suggest that the use of TSWE in placement results in no unfairness to any of the four groups analyzed in this study.

Table 20

Proportions of Misses Based on Essay Outcomes

TSWE Cutting Score	Males (493)	Females (403)	Majorities (681)	Minorities (115)
60	.38	.50	.42	.27
55	.31	.38	.33	.25
50	.26	.27	.24	.23
45	.24	.21	.21	.21
40	.28	.31	.23	.18
35	.33	.35	.27	.27
30	.44	.36	.31	.40
25	.53	.41	.35	.52
20	.62	.45	.54	.73

Summary and Conclusions

Data for the TSWE were collected for two academic years. Fourteen institutions participated in the first year and four in the second. Within each of the years, data were pooled and then subclassified into four groups: males, females, majorities, and minorities. The groups were then compared with respect to TSWE score distributions, correlations of TSWE scores with later performance in freshman English courses, regressions of essay scores on TSWE scores, and course placement.

Neither the correlational nor the regression analyses suggested any substantial differences in prediction among the groups. Statistically significant differences were obtained, however, between the slopes of the regression lines for males and females and between the intercepts of the regression lines for majorities and minorities. The regression lines thus indicated that females scoring high on the TSWE tended to write better essays than males scoring high on the TSWE. Conversely, low-scoring females tended to write worse essays than low-scoring males. The majority and minority regression line comparisons indicated that, for the same TSWE score, majorities tended to write better essays than minorities throughout the range of TSWE scores. However, these differences were not of sufficient size to be of any practical significance.

Analyses were also made of hits, misses, false-positive errors, and false-negative errors. False-positive errors occur when a high TSWE score is associated with either a low course grade or a low essay score. False-negative errors occur when a low TSWE score is associated with either a high course grade or a high essay score. Misses consist of the

sum of false-positive and false-negative errors. These analyses were of interest for comparison with recent literature; however, they suggested a lack of generalizability resulting from their dependence upon the cutting score. The correlational and regression analyses offered more generalizable results.

Perhaps the most significant aspect of the study was the use of an objective criterion (a graded essay score) for the comparison of predictive validities of the TSWE for the four groups. Much past research on predictive validity comparisons has been questioned on the grounds that course grades, a subjective criterion, may be biased for or against females or for or against minorities. The use of a blind-scored essay greatly reduces possible biases because the professionals scoring the essays have no contact with nor knowledge of the students who wrote the essays. The study showed that when the possible biases were controlled by the blind-scoring procedure the results were quite similar to results that have been obtained with more subjective criteria such as course grades.

The study was limited to some degree, of course, by the necessity of combining all minorities into one group. Future studies should attempt to focus on single groups. Therefore, sufficient quantities of data should be collected for within-group analysis.

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